

CLAIMS

1. A method of verifying a traffic violation image which method includes the following steps:
 - 5 automatically sensing whether or not a vehicle commits a traffic violation;
automatically capturing an image which shows the vehicle committing a traffic violation if it is sensed that the vehicle has committed a traffic violation;
obtaining verification data which verifies that the step of sensing is accurate within acceptable limits; and
 - 10 automatically combining the obtained verification data with the captured traffic violation image to provide proof of the accurate sensing of the traffic violation.
2. A method as claimed in claim 1, wherein the step of sensing includes measuring the speed of a vehicle travelling along a road.
- 15 3. A method as claimed in either one of claims 1 or 2, wherein the step of sensing includes sensing whether a vehicle disobeys a traffic indicator.
4. A method as claimed in any one of claims 1 to 3, wherein the step of
20 capturing the traffic violation image includes photographically capturing the image on film.
5. A method as claimed in any one of claims 1 to 3, wherein the step of capturing the traffic violation image includes capturing the image in digital format.
- 25 6. A method as claimed in claim 5, wherein the captured traffic violation image is digitally encrypted.
7. A method as claimed in either one of claims 5 or 6, wherein the
30 captured traffic violation image is digitally signed.
8. A method as claimed in any one of claims 1 to 7, wherein the step of obtaining the verification data includes obtaining first calibration data which verifies the calibration history of equipment used to sense the traffic violation.

9. A method as claimed in any one of claims 1 to 8, wherein the step of obtaining the verification data includes obtaining second calibration data which verifies the calibration history of equipment used to capture the traffic violation image.
- 5 10. A method as claimed in either one of claims 8 or 9, wherein the calibration data is obtained from an engineer.
11. A method as claimed in any one of claims 8 to 10, wherein the
10 calibration data is retrieved from an electronic storage means.
12. A method as claimed in claim 11, wherein the calibration data stored in the storage means is periodically updated by an engineer.
- 15 13. A method as claimed in either one of claims 8 or 9, wherein the calibration data is automatically generated by suitably configured calibration equipment.
14. A method as claimed in any one of claims 8 to 13, wherein the
20 calibration data includes any set of operations performed in accordance with a definite, documented procedure that compares the measurements performed by an instrument to those made by a more accurate instrument or standard for the purpose of detecting, reporting, and eliminating by adjustment any errors in the instrument tested.
- 25 15. A method as claimed in any one of claims 8 to 14, wherein the calibration data includes validation by means of a digital signature.
16. A method as claimed in any one of claims 1 to 15, wherein the step of
30 obtaining the verification data includes obtaining operational parameters of the equipment used to sense the violation.

17. A method as claimed in any one of claims 1 to 16, wherein the step of obtaining the verification data includes obtaining operational parameters of the equipment used to capture the traffic violation image.

5 18. A method as claimed in claim 17, wherein the operational parameters include ambient conditions of the equipment used to sense the violation.

19. A method as claimed in either one of claims 17 or 18, wherein the operational parameters include ambient conditions of the equipment used to capture
10 the traffic violation image.

20. A method as claimed in any one of claims 17 to 19, wherein the operational parameters include operating levels of components comprising the equipment used to sense the violation.

15 21. A method as claimed in any one of claims 17 to 20, wherein the operational parameters include operating levels of components comprising the equipment used to capture the traffic violation image.

20 22. A method as claimed in any one of claims 17 to 21, wherein the operational parameters include the geographic location where the image is captured.

23. A method as claimed in claim 22, wherein the geographic location is specified by an engineer installing the equipment used to sense or capture the traffic
25 violation image.

24. A method as claimed in claim 22, wherein the geographic location is supplied by a Global Positioning System (GPS).

30 25. A method as claimed in any one of claims 17 to 24, wherein the operational parameters include a unique identifying number of an engineer who installed the equipment used to sense or capture the traffic violation image.

26. A method as claimed in any one of claims 17 to 25, wherein the operational parameters include identification numbers of components comprising the equipment used to sense or capture the traffic violation image.
- 5 27. A method as claimed in any one of claims 17 to 26, wherein the operational parameters include a preprogrammed speed limit which, when exceeded by a vehicle sensed by the equipment used to sense the violation, triggers the step of capturing the traffic violation image.
- 10 28. A method as claimed in any one of claims 17 to 27, wherein the operational parameters include a grace time period before the step of capturing is triggered by the step of sensing.
29. A method as claimed in any one of claims 17 to 28, wherein the
15 operational parameters represent real-time values obtained at the same time that the image is captured.
30. A method as claimed in any one of claims 1 to 29, wherein the step of
obtaining the verification data and the step of capturing the traffic violation image is
20 performed simultaneously.
31. A method as claimed in any one of claims 1 to 30, wherein the step of
combining the verification data with the traffic violation image includes imposing the
verification data onto the traffic violation image.
- 25 32. A method as claimed in any one of claims 1 to 31, wherein the step of
combining the verification data includes digitally signing and encrypting the
verification data together with a digital violation image.
- 30 33. A method as claimed in any one of claims 1 to 32, wherein the step of
combining the verification data with the traffic violation image includes printing the
verification data onto the traffic violation image.

34. A method as claimed in any one of claims 1 to 33, which includes the step of storing the verified image on a suitably configured storage means.

35. A method as claimed in any one of claims 1 to 34, which includes the
5 step of transmitting the verified image to a remote location.

36. A system for verifying a traffic violation image which system includes:
a sensor for automatically sensing whether or not a vehicle commits a traffic violation;

10 a camera arranged in communication with the sensor which camera is configured to automatically capture an image of a vehicle committing a traffic violation if it is sensed that the vehicle has committed a traffic violation; and

a processor arranged in communication with the camera which processor is configured to obtain verification data which verifies that the sensor senses accurately
15 within acceptable limits, and to combine the obtained verification data with the captured traffic violation image to provide proof of the accurate sensing of the traffic violation.

37. A system as claimed in claim 36, wherein the camera includes a digital
20 camera.

38. A system as claimed in claim 36, wherein the camera captures images on photographic film.

39. A system as claimed in either one of claims 36 or 37, wherein the traffic violation image is stored in digital format.

40. A system as claimed in claim 39, wherein the traffic violation image is digitally signed.

41. A system as claimed in either one of claims 39 or 40, wherein the traffic violation image is digitally encrypted.

42. A system as claimed in any one of claims 36 to 41, wherein the verification data includes first calibration data for verifying the calibration history of the sensor.
- 5 43. A system as claimed in any one of claims 36 to 42, wherein the verification data includes second calibration data for verifying the calibration history of the camera.
44. A system as claimed in either one of claims 42 or 43, which includes
10 storage means for storing the calibration data.
45. A system as claimed in claim 44, wherein the processor obtains the calibration data from the storage means.
- 15 46. A system as claimed in either one of claims 44 or 45, wherein the calibration data stored in the storage means is periodically updated by an engineer.
47. A system as claimed in any one of claims 42 to 46, wherein the calibration data includes any set of operations performed in accordance with a
20 definite, documented procedure that compares the measurements performed by an instrument to those made by a more accurate instrument or standard for the purpose of detecting and eliminating by adjustment, errors in the instrument tested.
48. A system as claimed any one of claims 42 to 47, wherein the calibration
25 data includes validation by means of a digital signature.
49. A system as claimed in any one of claims 36 to 48, wherein the processor obtains verification data by obtaining operational parameters of the system.
- 30 50. A system as claimed in either one of claims 49 or 50, wherein the operational parameters include ambient conditions of the system.

51. A system as claimed in either one of claims 49 or 50, wherein the operational parameters include operating levels of components comprising the system.

5 52. A system as claimed in any one of claims 49 to 51, wherein the operational parameters include a geographic location where the image is captured.

53. A system as claimed in claim 52, wherein the geographic location is specified by an engineer installing the system at the location.

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54. A system as claimed in claim 52, wherein the geographic location is supplied by a Global Positioning System (GPS).

55. A system as claimed in any one of claims 49 to 54, wherein the operational parameters include a unique identifying number of an engineer who installed the system.

56. A system as claimed in any one of claims 49 to 55, wherein the operational parameters include identification numbers of components comprising the system.

57. A system as claimed in any one of claims 49 to 56, wherein the operational parameters include a preprogrammed speed limit which, when exceeded by a vehicle sensed by the sensor, triggers the camera which captures the traffic violation image.

58. A system as claimed in any one of claims 49 to 57, wherein the operational parameters include a grace time period before the camera is triggered by the sensor.

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59. A system as claimed in any one of claims 49 to 58, wherein the processor obtains the operational parameters as real-time values.

60. A system as claimed in any one of claims 36 to 59, wherein the processor obtains the verification data at the same time that the camera captures the traffic violation image.

5 61. A system as claimed in any one of claims 36 to 60, wherein the processor combines the verification data with the traffic violation image by imposing the verification data onto the traffic violation image.

62. A system as claimed in any one of claims 36 to 61, wherein the
10 processor combines the verification data with the image by digitally signing and encrypting the verification data together with the violation image.

63. A system as claimed in any one of claims 36 to 61, wherein the
15 processor combines the verification data with the traffic violation image by facilitating the printing of the verification data onto the traffic violation image.

64. A system as claimed in claims 63, which includes a printing means for printing the violation image and the verification data onto a suitable surface.

20 65. A system as claimed in any one of claims 44 to 62, wherein the processor stores the verified violation image on the storage means.

66. A system as claimed in any one of claims 36 to 65, wherein the
25 processor facilitates the transmission of the verified violation image to a remote location.

67. A method for verifying a traffic violation image or a system for verifying a traffic violation image, according to the invention, substantially as herein described and illustrated.

30 68. A new method for verifying a traffic violation image or a new system for verifying a traffic violation image substantially as herein described.